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Towards sustainable community development: education for sustainable development initiatives in Nishinomiya, Japan

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Abstract: Sustainable development was designated an international priority at the Rio de Janeiro Earth Summit in 1992. Agenda 21, an action plan for sustainable development formulated at the summit, encouraged local authorities to address sustainable development at the local level and implement initiatives to develop sustainable communities through community participation. In Nishinomiya city, Japan, the local government introduced education for sustainable development (ESD) programmes in the late 1980s to promote community participation and sustainable community development. The Learning and Ecological Activities Foundation for Children (Leaf), a non-profit organisation (NPO), was established in 1998 to facilitate and maintain the programmes initiated by local government and further promote sustainable community development in Nishinomiya city. This paper identifies some of the key elements necessary for developing a sustainable community by reviewing initiatives currently in place in Nishinomiya.

Keywords: education for sustainable development (ESD), non-profit organisation (NPO), community participation, sustainable development.

1. Introduction

1.1 Background

At Rio de Janeiro, Brazil, in 1992, the United Nations Conference on Environment and Development (UNCED) — more commonly known as the Earth Summit — established sustainable development as a priority to be addressed by the international community. Defined as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN 1992), sustainable development was enshrined in the action plan Agenda 21, which recognised local governments as important agents for sustainable development and called upon them to develop sustainable cities and communities in the areas under their jurisdiction (UN 1992).

Researchers and practitioners working in city planning and sustainable

development recognise that public participation is an important tool to address environmental and sustainability issues in cities (UN 1992; EC 1996; Ueta 2004). The cooperation of business sectors is also considered essential to achieve sustainable development, given the influence of business activity on the environmental and social factors affecting residents. While top-down local or national government environmental policies such as strict environmental regulations and punitive environmental tax can foster resentment among residents and business people, consulting them in decision making and seeking their understanding and participation in environmental policy making increases the level of acceptance and compliance in local and business communities.

Education is considered a vital means to promote public participation (World Commission on Environment and Development 1987; UN 1992; Unesco 2005). UNCED established the basis for environmental education (EE) for sustainable development in “Promoting education, public awareness and training” in Chapter 36 of Agenda 21 (UN 1992). Earth Summit 2002, held in Johannesburg, reviewed the achievements of Agenda 21. The UN continued to advocate the importance of combining sustainable development and education and subsequently proposed a resolution — adopted in December 2002 by the United Nations General Assembly — for a United Nations Decade of Education for Sustainable Development (2005–2014) to promote the active pursuit of sustainable development. Unesco, designated the lead agency for the promotion of the Decade, proposed education for sustainable development (ESD) as a means to realise “a world where everyone has the opportunity to benefit from quality education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation” (Unesco 2009). The characteristics of ESD were defined as follows:

- Envisioning — being able to imagine a better future. The premise is that if we know where we want to go, we will be better able to work out how to get there.
- Critical thinking and reflection — learning to question our current belief systems and to recognise the assumptions underlying our knowledge, perspective and opinions. Critical thinking skills help people learn to examine the economic, environmental, social or cultural structures in the context of sustainable development.
- Systemic thinking — acknowledging complexities and looking for links and synergies when trying to find solutions to problems.
- Building partnerships — promoting dialogue and negotiation, learning to work together.
- Participation in decision making — empowering people.

(Unesco 2009)

The objective of ESD thus defined is to help people identify problems that may harm livelihood and hamper sustainable development, and learn how to understand the relationships among various environmental, economic and social issues and the mechanisms that give rise to problems. ESD also empowers people to develop action plans that work towards sustainable development. Successful ESD is about developing the capacity to promote sustainable communities, in other words, it is not just learning about environmental issues.

Nishinomiya city in Japan has proved particularly effective at incorporating ESD as part of its partnership-based city development and environmental learning programmes. The city's success in pioneering environmental learning programmes and promoting community development has won it several domestic and international accolades. These include the Recycling — Symbiosis — Participation City Development Award in 2006 from the Japanese Ministry of Environment; the Environmental Grand Prix 2004 for Local Municipalities from the Japan Productivity Centre; the Fifth Green Purchasing Award in 2002 from the Japanese Green Purchasing Network; the First Children's Environment Award in 2006 from the Japanese Association for Children's Environment; and the Fourth Partnership Award in 2006 from the NPO Partnership Support Centre in Japan. Having first promoted environmental learning programmes in 1989 and declared itself an environmental learning city in 2003, Nishinomiya is currently implementing various environmental-learning and ESD projects, based on the declaration. In 2006, Nishinomiya's ESD programmes were selected as a model for ESD programmes throughout Japan by the Japanese Ministry of the Environment. The city established the Learning and Ecological Activities Foundation for Children (Leaf), an NPO, in 1998 to facilitate its various ESD programmes. Leaf was established not only to promote environmental learning but to build partnerships among citizens, businesses and local government in Nishinomiya (Leaf 2004).

1.2 Objective of the study

This study identifies some of the key elements necessary for developing sustainable communities through NPO-coordinated collaboration between various stakeholders such as local governments, residents, schools and businesses. An analysis of community activities facilitated by the Nishinomiya-based NPO Leaf emphasises the active role NPOs may take in the promotion of sustainable community development and ESD at the local level.

1.3 Methodology

This case study is the result of research conducted in Nishinomiya between June

2004 and February 2009 and is based primarily on data collected through participant observation and interviews. The author participated in the Environmental Learning City Steering Committee of Nishinomiya, a working group initiated by the city to promote environmental learning in Nishinomiya from 2004, before serving as a member of the Nishinomiya ESD Exploratory Committee from 2006 and on the board of Leaf from 2007. These activities allowed the author to observe the day-to-day activities and decision-making processes of initiatives for sustainable community development taking place in Nishinomiya. The author subsequently conducted general interviews with members of Leaf and local government officials regarding various environmental learning activities. Mr Masayoshi Ogawa — a former employee in city government, initiator of many of the environmental learning activities in Nishinomiya and founder of Leaf — proved a particularly rich source of information during a series of extensive interviews. Local and national documents that relate to sustainable community development, a wide number of Leaf and Nishinomiya city publications, and other related literature were examined later in order to survey community development and ESD activities promoted in the city of Nishinomiya.

2. Sustainable community development initiatives in Nishinomiya

2.1 Introducing Nishinomiya

With a population of approximately 450,000 and an area of 100 km², Nishinomiya is located between Osaka and Kobe in the south-eastern part of Hyogo prefecture, in the Kansai region of central Honshu, Japan. Nishinomiya has developed as an important commercial and shipping hub in the region, and is home to the third largest population in Hyogo prefecture. The major local businesses of Nishinomiya are small and medium-sized companies. Famed in particular for its sake (Japanese rice wine) brewing industry, the number of business establishments, employees and local industries in Nishinomiya are currently in decline as local industries face economic recession and intensifying competition from home and abroad. These economic factors, in conjunction with the advantages of its geographic location, have prompted Nishinomiya to develop itself as a residential city acting as a dormitory town for residents commuting to the nearby industrial hubs of Osaka and Kobe.

Community activism on environmental issues in Nishinomiya dates back to 1960 and 1971, when citizens joined forces with the sake brewers to protest against the establishment of petroleum complexes and waterfront land reclamation schemes. The protests in each case were motivated by the need to protect the city shoreline and the quality of water in the city. The sake brewing industry was

particular vociferous in its protests; water is the vital ingredient in ensuring the quality of sake. Discussions among the city government, local communities and the sake brewers finally prompted the local government to cancel construction plans and opt instead to preserve Nishinomiya's shoreline; this, at a time when the national government and local governments in other cities were enthusiastically promoting economic development with little regard to environmental cost.

Increasing worldwide concern for environmental issues since the 1980s prompted the launch of government-led community-based environmental learning activities in Nishinomiya. Mr Masayoshi Ogawa, department chief of environment at Nishinomiya city government at the time, initiated a citizen's nature survey in 1989 and 1990 and the development of the Earth Watching Club (EWC) programme in 1992. Subsequent environmental learning programmes in Nishinomiya city reflected changes in perception to community-based environmental learning projects that occurred in the wake of the Great Hanshin-Awaji Earthquake, which struck the southern part of Hyogo prefecture in 1995, claiming more than 6,000 lives. Once regarded primarily as effective tools for tackling environmental issues, projects such as the EWC were perceived to have the potential to link environmental concerns with other issues such as disaster and city development. The gradual incorporation of these wider concerns in environmental learning initiatives such as the EWC preceded the launch of Leaf in 1998. Leaf's aim is to contribute to the development of a sustainable society by building partnerships among citizens, businesses and the local government and facilitating various environmental policies and community-based environmental initiatives for the government of Nishinomiya.

2.2 A sustainability framework for Nishinomiya city

Nishinomiya city issued an Environmental Learning City Declaration and published an Environmental Learning City Action Charter in 2003. The charter states the city's aim to build a sustainable city through environmental learning and participation and collaboration among various community sectors such as citizens, businesses and municipal government. The charter set up five goals for the Environmental Learning City: 1. learning together, 2. participation/collaboration, 3. harmonious existence, 4. circulation, and 5. network. Based on the charter, Nishinomiya city published a new environmental plan in 2005 which established eight environmental goals for the city (see Figure 1). The plan emphasised two fundamental objectives: first, to develop communities that nurture generations through environmental learning; and second, to build a community system that encourages multi-stakeholder decision making.



Figure 1. An overview of the 2005 Nishinomiya city environmental plan
(Source: Yoshizumi based on Leaf 2007)

2.3 Building partnerships between citizens, businesses, schools and local government

Nishinomiya city has established several partnership organisations to promote the participation of residents and the private sector in implementing its environmental plan. One such organisation is the Environmental Plan Promotion Partnership Meeting, which involves citizens, businesses, experts and representatives of the city government. Another is the Nishinomiya Environmental Learning City Partnership, which brings together a number of eco communities, an eco network and the Nishinomiya city government. Eco communities are comprised of residents who live in the same junior high school catchment areas and work together to promote environmental learning programmes and participatory town planning for sustainable development in their local neighbourhoods. Eco networks are made up of community groups, school teachers, businesses and the city government. They attempt to develop an environmental learning framework for the city and programmes of education for sustainable development. An environmental learning steering partnership council, comprising leaders of community groups, environmental experts, business sectors and the city government, was established to coordinate the ideas and activities of the eco community, eco network and city government. As the secretariat for the council, Leaf facilitates the discussions that take place among the members, and relays the results of these discussions to local government, where they may stimulate change at the political level.

2.4 ESD programmes in Nishinomiya

Nishinomiya city government established the Nishinomiya ESD Promotion Council in 2006 as a partnership organisation to promote the city government's

ESD programme, launched in the same year. Member organisations on the council include Leaf, the Nishinomiya City Council Social Welfare Department, the Nishinomiya Teachers' Union, the Nishinomiya Chamber of Commerce and Industry, Coop Kobe (a consumer cooperative), Nishinomiya city government, the Nishinomiya Education Board, the Nishinomiya ESD Exploratory Committee and *Kobe Shinbun*, a newspaper. Nishinomiya's ESD programmes enhance links between various social welfare and environmental organisations that focus on a wide range of issues, such as waste management. They run environmental learning programmes and seminars, provide training programmes and promote information sharing (Nishinomiya 2009). These organisations — some community based, some governmental — connect different sectors, work with all generations (from children to the elderly) and set up partnerships between Nishinomiya city and the world. Before the launch of the programme, these organisations tended to conduct their environmental, welfare, gender, peace and international activities independently. Sectionalism hindered cooperation and this undermined the efficacy of their work. By bringing them together, Nishinomiya's ESD programmes connect each issue and each organisation and promote cooperative activities for sustainable development in the city.

A wide variety of activities carried out in Nishinomiya's ESD programmes have been developed on the basis of the city's Environmental Learning City Action Charter and its goals. Activities in the programmes aim to link issues such as environment, peace, gender and welfare and to develop a system of mutual learning and promote citizen participation through ESD. A description of a number of these activities is offered in Sections 2.4.1 to 2.4.7.

2.4.1 Eco-card system

Nishinomiya launched an eco-card project in 1998 as a part of its city-wide EWC activities. This ongoing project aims to forge links between schools, families and communities through so-called "eco actions", which include efforts to clean up neighbourhoods, learn about the natural environment, reduce solid waste and so on. All elementary school pupils in Nishinomiya receive an eco card annually. When children carry out an eco action, such as purchasing an ecologically friendly product or separating recyclable goods from garbage in the community, their cards are stamped by one of the 1,500 eco-stamp holders participating in the project. These include Leaf; Nishinomiya schools; 298 shops across the city (such as stationers, banks and supermarkets); the city hall; residents' associations; community centres and any other institutions that are part of the programme. Children who collect more than 10 eco stamps on their eco cards are awarded the title "earth ranger". Each year, more than 2,000 children are certified as earth

rangers in Nishiomiya. In 2004, 2,048 earth rangers were certified in Nishinomiya city alone. Nationwide, 82,300 school-children became earth rangers in the same year (Japanese Ministry of the Environment 2005).

An interesting aspect of this activity is that eco-stamp holders decide independently whether a child's action is an eco action. This means that while children actively search for actions that might be considered ecological or environmentally friendly, stamp holders also continue to learn and develop their ideas about what can be considered eco actions. Another feature of the eco card programme is that it is tailored for each school age group. For example, third and fourth grade students (nine to 10 year-olds) must conduct research and interviews with individuals working on environmental issues in the public and private sectors in order to collect stamps. The information gathered from these interviews is shared with the community through a student-hosted radio show called Eco Messenger, which is aired locally by an FM station.

Initially, the project focused on elementary school children, but the eco card programme has expanded since its launch in 1998 to include children of kindergarden and high-school age (15- to 18-year-olds). Examples of eco cards are shown in Figure 2.

2.4.2 Safety and eco guide project

This project promotes initiatives in environmental and disaster-management education, based on lessons learned from the Great Hanshin-Awaji Earthquake. It aims to encourage adults and children to participate actively in various environmental actions on a daily basis and to bring together families, communities and schools to learn about local issues relating to safety and the

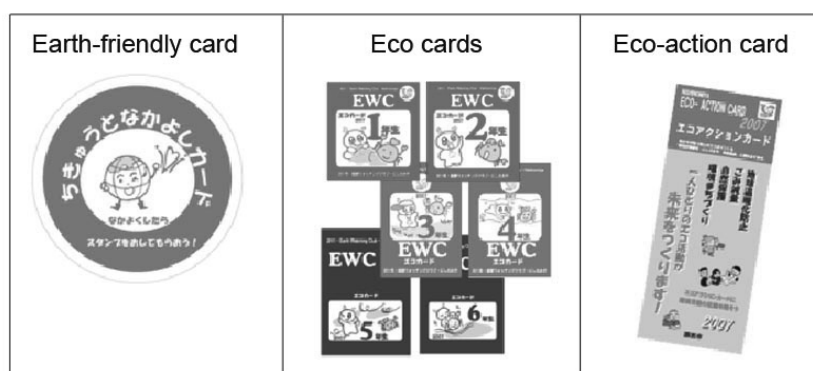


Figure 2. Nishinomiya eco cards for children of kindergarden age (left), elementary school age (centre) and students and citizens over the age of 13 (right)
(Source: Leaf 2007)

environment. The project encourages citizens to feel more confident and safe in their city by learning about its local history, natural environment, geographical setting and how safety and nature in the town relate to each other. The city government published a Safety and Eco Guide in 1997, distributed upon request for use by community leaders and school teachers.

2.4.3 Legacy tellers programme

Leaf developed a “legacy tellers” programme in collaboration with schools as part of its Safety and Eco Guide project. Legacy tellers are senior citizens who are invited into schools to talk to children about the environment as they saw it when they were young. Leaf organises training seminars in the community for senior citizens to learn how to become legacy tellers. As part of their training, participants in the seminars walk 10 routes around the city that reveal historical and environmental points of interest. In doing so, they learn about the geographical setting of various areas in Nishinomiya. Leaf later invites graduates of the training seminars to take a leading role in special classes organised in schools, which enable students to learn about environmental issues from the different perspectives provided by legacy tellers. In these classes, legacy tellers may compare the environmental conditions of the present and the past and talk about how the natural environment has changed. The classes are not restricted to school children and may be attended by residents who are new to Nishinomiya.

This programme helps citizens to become interested in their own communities and learn about any problems their communities face. For this reason, Nishinomiya city government has developed the legacy tellers programme for use in “town watching”, a method of community-based town planning that encourages residents of the city to visit various local sites, identifying their good points, such as a lively local market or beautiful landscape, and bad points, such as traffic congestion or solid waste pollution (Leaf 2004a). The programme has inspired eco actions, community-based activities and the creation of eco communities in Nishinomiya. In addition, it forms the basis of the popular Nishinomiya *Furusato* (a Japanese word for hometown) Walk for a Sustainable City ESD programme, organised since 2007. About 450 participants took part in this event in January 2009.

2.4.4 Experience-based environmental education programmes in Nishinomiya

Activities that enable children to come into direct contact with nature enable them to learn about the natural environment. The Miyamizu Junior Nature Observation Activity programme created by the city of Nishinomiya and facilitated by Leaf was approved as an official educational programme by the

Nishinomiya Board of Education in 2003. It enables children to learn about the mountains, rivers and the sea, which border and transect their communities, through school excursions to these sites, hands-on games and exploratory activities that draw on aspects of the natural environment. Some activities in the programme incorporate aspects of the legacy tellers programme by demonstrating how senior citizens of the city interacted with the natural environment in their youth. These activities have won national recognition as successful initiatives in environmental education.

Leaf currently organises training seminars for community leaders and local government workers who are planning to supervise nature experience activities. Participants come to Leaf from all over Japan to learn from Leaf's successes in environmental education. They are expected to develop nature experience activities tailored to their local communities after completing the training seminars.

2.4.5 Agricultural activity-based environmental learning in Nishinomiya

The rate of food self-sufficiency in Japan — that is, the ratio of food produced domestically and consumed daily in Japan — is about 40 per cent (Ministry of Agriculture, Forestry and Fisheries 2009). Nationwide, the Japanese agricultural sector is in decline. In Nishinomiya, most farmland is located within urban areas. This puts the city's agricultural sector in a difficult situation that worsens year by year as more farmland is replaced with industrial sites (Nishinomiya 2005).

Leaf launched the Mt. Kabuto Agriculture School in 2006 to encourage residents of Nishinomiya to learn about rice and vegetable cultivation and reconsider the ways in which they interact with the natural environment. Leaf organises all activities within this agricultural project with the support of business-sector sponsors, which include several food processing companies, a waste management company, Coop Kobe and Kobe College, located in Nishinomiya. Activities include the school's activity programmes, seminars and events based on farming activities, such as cultivating land, sowing, planting rice and vegetables, harvesting and cooking. Through these, the young families with school children, who make up the bulk of the participants, can learn about the growing and harvesting of foods and can connect with the natural environment.

2.4.6 Connecting the private sector to environmental learning programmes

Leaf facilitates efforts by local government to engage corporations in developing environmental learning programmes for students and residents to encourage collaboration between the public and private sectors. The Mt. Kabuto Agricultural School project described above is just one example of how

corporations are encouraged to get involved: a number of food-processing companies, Coop Kobe and Kobe College sponsor the project financially and a waste management company promotes the composting of food waste at the Mt. Kabuto site. Private companies also participate in an educational programme for school children implemented by Leaf. In the programme, schools and companies organise educational activities on the basis of six different themes: clothing, food, housing, energy, eco-friendly stationery and bottles. Representatives of the companies talk to school children about how these themes relate to their work and what steps they are taking to make their activities more eco friendly. Other private-sector initiatives include eco tours organised by Nishinomiya-based recycling companies and waste treatment companies, which enable participants to learn about waste treatment and the production of recycled products.

All these activities enable private companies to get involved in environmental learning activities at the local level. Residents and children have the opportunity to learn about environmentally friendly products and services provided by local businesses and environmental issues that are relevant to where they live. The growing interest of companies and corporations in sustainable business practices that accord with the ethics of corporate social responsibility¹ is one reason why elements of Nishinomiya's private sector are willing to connect with local communities in the activities summarised here.

2.4.7 Establishment of environmental learning centres

Nishinomiya city has established three environmental learning centres that are open to the general public. All of them are operated by Leaf. Their location in the mountain and coastal areas bordering the city and in the city centre gives residents access to information about environmental issues specific to the centres' surrounding areas. They also act as community centres where residents can communicate with each other, Leaf and local government in an environment of recreation and relaxation.

2.5 Enhancing community initiatives

As mentioned in Section 2.3, Nishinomiya city has established a framework for creating eco communities in 20 junior high school catchment areas as part of the Nishinomiya Environmental Learning Partnership. Eco communities are expected to develop their own activities and initiatives to develop a sustainable community and do so by bringing together the leaders of various community groups, residents, local businesses, local government officers and Leaf — the last acting as facilitator during the discussion, development and implementation of each activity plan. Nishinomiya city government provides small grants of

¥100,000 (about 1,000 US dollars) a year to each eco community to assist their initiatives and the implementation of these action plans.

The first step in establishing an eco community in Nishinomiya is conducted through town watching, whereby residents walk around their neighbourhoods and learn about issues and values specific to their local areas, such as which buildings are historic and what natural features their neighbourhood boasts. The next step is to develop goals and a community action plan towards creating a sustainable community. Figure 3 shows the evolution of an eco community and portrays eco-community development as a learning process comprising a series of continuous actions.

In 2005, Nishinomiya city held an Environmental Town Planning Workshop and initiated town watching in eight junior high school catchment areas to promote its eco-community programme. Eight eco communities have since been established — one in each of the eight sites — and activities are underway in all of them, focusing on local issues determined over the course of discussions within each eco community (see Table 1 for a summary of ongoing activities). Nishinomiya city is trying to develop eco communities in the remaining 14 junior high school catchment areas to bring the total number of eco communities up to 20 by 2009.

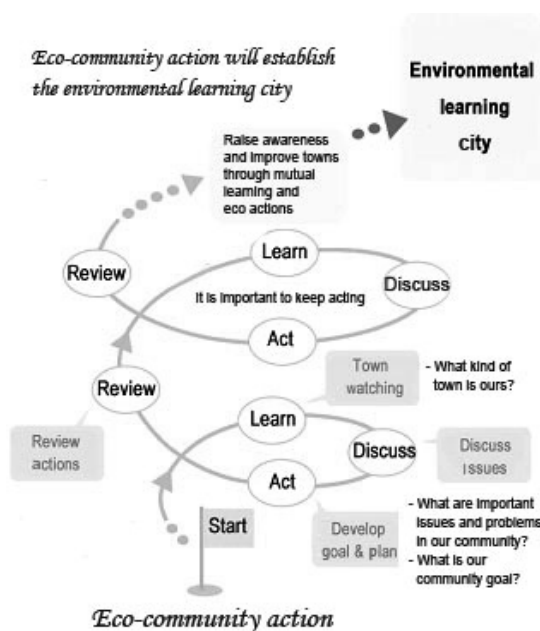


Figure 3. The evolutionary process of a Nishinomiya eco community

(Source: Yoshizumi, based on Leaf 2007)

Table 1. Eight eco communities and their activities

	Catchment area/name of eco community	Year of establishment	Activity	Aim of activity
1	Gakubun	2006	“My bag” campaign	Reduce use of plastic bags through a campaign to encourage individuals to carry their own reusable bags when shopping.
2	Hamawaki/Kōroen	2006	Local history project	Connect schools to local community through the study of local history. Classes are organised in Hamawaki community centre where students learn about local history through discussion with senior citizens and make presentations to local communities on what they have learned. School children publish a children's newspaper and distribute it in the local community.
3	Kōtō	2007	Household waste-reduction project	Reduce household waste. Members of the community work with a garbage collection company to measure the amount of household waste produced in the community. Workshops and exhibitions are organised to disseminate the results of the project.
4	Harukaze	2007	Nature experiences for children	Increase opportunities for children to enjoy contact with the natural environment. A day of activities at Mt. Kabuto and eco-craft classes where children make toys and photo frames from natural materials are two ways in which children are encouraged to interact with nature.
5	Shioze	2007	Community forum	Discuss what should be passed on to the next generation, what issues are important to the local community and what environmental activities should be organised for junior high-school students and the local community. Junior high-school students participate in the forums and discussions with the local community.
6	Hiraki	2007	Family eco monitoring	Reduce household CO ₂ emissions and publish a newsletter that shares information and reduction results among members of the eco community. The newsletter also addresses topics such as how to prevent global warming.
7	Hama-kōshien	2009	Cleaning up the neighbourhood	Conduct clean-up activity with school children and parent teacher associations.
8	Kawaragi	2009	Activity still in planning stages	Use town walking to define scope of activities suitable for the Kawaragi district.

2.6 International cooperation

Nishinomiya city government projects extend beyond the domestic level to foster global partnership among children around the world. Working through Leaf, Nishinomiya city organises the Junior Eco-Club Asia-Pacific Conference each year. In addition, Leaf has created the Chikyu Kids Environmental Network (www.chikyu-kids.net), a worldwide database of children's environmental activities that covers more than 80 countries. Leaf has also coordinated joint

projects between Nishinomiya and Burlington, Vermont. These include activities in both cities that promote education for sustainability through community partnerships.

A number of international cooperation programmes have also been organised in Nishinomiya. The Japan International Cooperation Agency (JICA)² funds training programmes organised and implemented by Leaf that enable participants to learn about community development and environmental learning programmes taking place in Nishinomiya city. To date, Leaf has organised several JICA-sponsored training programmes for international students in Japan, local and national government workers, NGO staff and university researchers from Malaysia, Chile and the Pacific Islands. Leaf also organises training programmes funded by the Japanese Ministry of Environment for researchers and NPO staff from China, Vietnam, Korea and the US. These activities do not only promote international cooperation but also increase motivation among the residents of Nishinomiya city.

3 Key success factors in Nishinomiya initiatives: an analysis

In 2008, approximately 4,030 earth rangers were certified through the eco-card project. Some 90 private companies engaged in environmental learning-related activities in Nishinomiya in the same year. Both these figures indicate that Nishinomiya city has been successful in raising levels of public participation and awareness through its various ESD activities. This section identifies a number of factors that have made a success of the efforts to realise sustainable community development through effective ESD in Nishinomiya.

3.1 Role of Leaf as a facilitator

Leaf was established in 1998 to promote environmental learning programmes in Nishinomiya through an initiative of the Environmental Learning City Promotion Section of Nishinomiya city government. Leaf seeks to realise its stated goal to support sustainable community development through efforts to (1) coordinate and promote the establishment of partnerships with and between various civic groups, the private sector and government agencies; (2) encourage the development of respect for the environment, including nature and culture; and (3) cultivate and enhance the self-learning capacity of individuals so they can increase their knowledge informally at home or in the community.

Leaf aims to establish a system to enable people who are relatively unconcerned with environmental issues to participate in environmental activities and city planning. The efforts of environmentalists to promote activities can fall

flat if citizens and members of the private sectors are reluctant to join in. Conversely, where people are active, attempts at public participation can easily create conflicts between government, the private sector and the citizens involved. For example, government-organised workshops and meetings with residents can be hijacked by residents for selfish “not in my backyard” motives or to present wish-lists to governments. Leaf addresses these problems by coordinating discussions between the city government and residents on one hand while encouraging environmental learning and ESD activities at the community level (which involve many types of stakeholders and individuals) on the other. Leaf’s eco-card system, events, publications, websites and training seminars enlist the support of students, residents and business sectors. They not only raise people’s awareness of environmental issues but increase their awareness of community development.

Engaging a wide range of citizens in activities is central to Leaf’s efforts to implement ESD. Young people and children, commonly viewed as the agents of behavioural change, are the typical targets of educational programmes. However, Leaf’s outreach extends beyond the young to other sectors of the workforce and the community. For instance, youth seminars organised in collaboration with private companies have proved particularly effective. Not only have they raised the awareness of the students involved but these seminars have helped the employees become more environmentally conscious and aware of important elements of sustainable development, such as the close interaction between economic activities and social and environmental consequences. This has created mutual learning opportunities for students and corporate employees.

3.2 Information-sharing system

Leaf has developed several booklets and newsletters for the government of Nishinomiya reporting on the progress and results of various community initiatives and environmental activities taking place in the city. Leaf has also created and operated a number of websites for the city to advertise various activities and share the results of activities of each eco community in Nishinomiya. The eco-community bulletin board shown in Figure 4 is one such site. It shows what areas and activities are being selected and conducted and who — such as members of the local community, the private sector and city government — are involved in the activities. Tallies show the number of eco stamps that have been awarded and applaud the efforts of those who have achieved the status of earth ranger. Minutes from the various eco community meetings are available for downloading from the site. The site enables people to monitor the activities in which they are taking part and compare them with

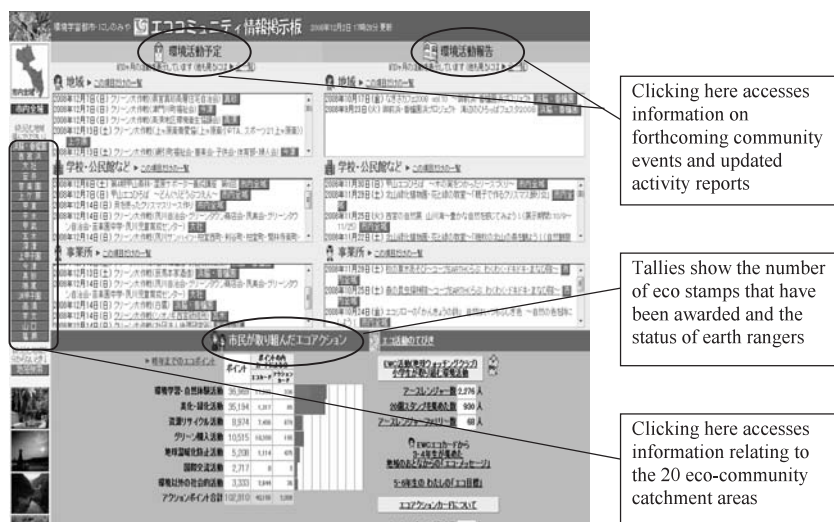


Figure 4. The eco-community bulletin board website
(Source : Leaf 2009)

others to increase levels of motivation.

Other websites operated by Leaf include a site relating to the Mt. Kabuto Agricultural School. This site provides information and photographs relating to events such as vegetable planting and rice harvesting, as well as information on the condition of the farm lands used in the project. Another site introduces the household garbage reduction project initiated by the Kōtō district eco community in 2008 (see Figure 5). Residents can learn the extent to which they have successfully reduced solid waste per garbage collection (twice a week in Nishinomiya). They can also see which neighbourhood is more likely to achieve the reduction goal set by the eco community. Leaf has also developed a website that introduces the concept of ESD and the contents of Nishinomiya city's ESD programme to residents. All these websites, in addition to the other literature distributed by Nishinomiya city government or through Leaf, encourage people to understand issues and activities and motivate participation.

3.3 Involving the business sector

Leaf has organised many events and activities to involve the business sector. Seminars and environmental learning programmes for elementary students organised in collaboration with the private sector are popular with private companies. At present, approximately 90 companies take part in Leaf activities.

Two projects that involve the business sector are the Kōtō eco-community household waste reduction project and the Mt. Kabuto Agriculture School, both

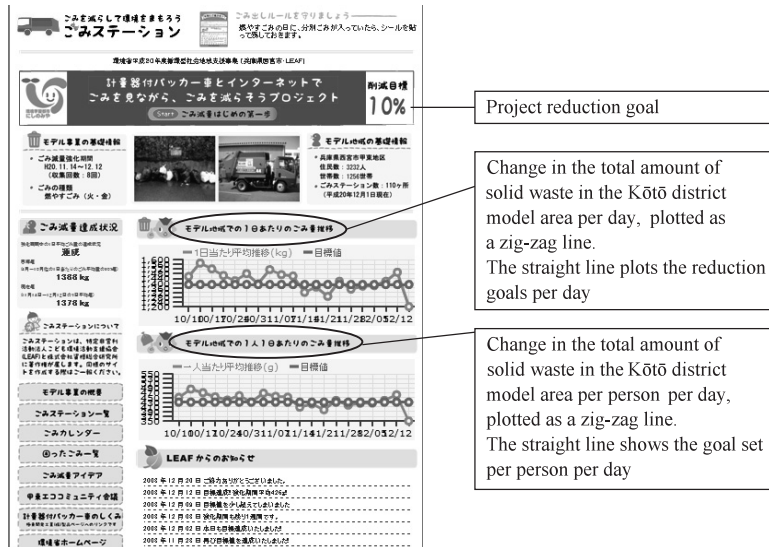


Figure 5. The Kōtō eco-community household garbage reduction website
(Source: Leaf 2008)

described earlier. In the former, three companies—a garbage collection company, a construction technology company that developed garbage-collection cars with measuring instruments, and a cleaning company—worked with residents and local government to reduce household garbage. In the latter, Leaf receives funding from several food processing companies and the companies organise several farming and cooking events facilitated by Leaf. The activities in both these projects bring the business sector face to face with residents. By doing so, they foster mutual understanding and encourage cooperation between citizens and businesses.

3.4 Securing sufficient budgets to continue the activities

The activities of NPOs are generally funded by government subsidies and grants plus money from private companies. Such financial sources can be unstable, making it difficult for NPOs to continue project work beyond a limited period. Leaf's annual income of about one million US dollars—substantial for a Japanese NPO—is funded primarily by Nishinomiya city government, JICA, the Japanese Ministry of Environment, individual membership fees, universities and the business sector. This diverse and stable income source enables Leaf to hire six employees on permanent contracts that give them basic employment benefits such as retirement allowance. Leaf also employs around 30 part-time staff. This makes Leaf unusual within the non-profit and non-governmental organisation sector, which usually requires staff to work as volunteers on an unpaid basis.

Stable income and a competent and committed workforce are two factors that account for Leaf's success in implementing sustainable community and ESD activities in Nishinomiya.

3.5 Increasing motivation in the local community

A number of initiatives in place in Nishinomiya increase the motivation of local communities. Collecting and comparing eco stamps motivates children to take environment action, while participating in the system as eco-stamp holders ensures that adults are also involved. In the Kōtō eco-community home refuse reduction project, the website maintained by Leaf shows and ranks the reduction rates achieved in each neighbourhood so residents can compare them. In each case, showing what individuals can achieve motivates participation in activities. Enjoyable and easy-to-join public events, such as town walking and activities relating to the Mt. Kabuto Agricultural School, attract people who are interested in environmental issues. Finally, newsletters, workshops and the websites developed by Leaf promote information sharing and increase the motivation not only of participants but of people who have yet to take part in activities.

Mutual learning in the ESD programme helps to develop public awareness of social, economic, and environmental issues and leads to the establishment of networks between various stakeholders, including students, local residents, local governments, NPOs and the private sector. These networks provide opportunities for various stakeholders to discuss issues around the same table and on an equal footing. This improves the capacity of participants to learn about and address environmental and development issues and avoids a common pitfall for many ESD programmes, namely, the lack of a common terminology, shared vision and clear channels of communication between various stakeholders.

4 Conclusion

Community participation is recognised as an essential component of a sustainable community in terms of city planning, international cooperation and rural development. However, efforts to promote community development remain difficult in practice (Ueta 2004). The Nishinomiya case study presented in this paper indicates some key elements that are essential to achieving sustainable community development through ESD.

First, the facilitator and coordinator role is necessary to promote community development. This case study has highlighted the importance of the role played by Leaf as a facilitator for environmental education initiatives in Nishinomiya and as a coordinator between communities and local governments. Leaf has

coordinated the activities of residents and local government plus the business sector, education sector, and several community groups. The involvement of industry is particularly important for sustainable community development and Leaf's efforts to involve the business sector are a key component of its activities.

Second, to coordinate various stakeholders, it is very important to share information. Leaf developed various communication systems, such as newsletters and websites. Efforts to disseminate the achievements of community development, such as waste reduction activity and eco-point activity, have proved particularly successful in Nishinomiya.

Finally, Nishinomiya city effectively uses its ESD programmes to involve various stakeholders, such as students, teachers, parents, universities, governments, businesses and so on. The various activities and projects in these programmes enable stakeholders, who may ordinarily lack the opportunity or the inclination to work together, to do so. This allows them to learn from each other and work together for sustainable community development.

These, then, are the lessons learned from the Nishinomiya case study. The above analysis underlines the importance of creating a neutral coordinator, such as Leaf, an effective information-sharing system and varied ESD activities. It reveals in particular the importance of a mutual learning environment that involves a variety of stakeholders from the public and private sectors, including children, young people, senior citizens and NPOs.

The examination of activities in Nishinomiya presented here suggests several effective practical features for sustainable community development. Further comparative study of community development in Japan and beyond could yield interesting findings in relation to the common core elements of successful community development programme design, observed in varying local contexts. Such findings could further contribute to the generation of other applicable models for use in the field of sustainable community development.

Notes

¹ Corporate social responsibility is defined as "the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large" (World Business Council for Sustainable Development 2009).

² JICA is an implementation agency that administers Japan's efforts to provide overseas development assistance in developing countries.

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